IN THE CLAIMS

Amend claims as shown below; cancel claims 7-8. Add new claims 11-13.

1 (Currently amended) ~~Method~~ A method for detecting the effect of different chemotherapeutic agents and/or radiation in malignant diseases by determining the expression levels of the p53 gene and/or variants thereof, comprising the steps,

(a) collecting cells and/or tissue from a subject with a malignant disease,

(b) determining the expression of the p53 gene or variants thereof by analysis of p53-specific RNA, in a portion of the cells and/or tissue,

(c) placing into culture an additional portion of the cells and/or tissue, and treating the cultured cells and/or tissue with one or more cytostatic scompounds and/or radiation treatments,

(d) determining the expression profile of the p53 gene or variants thereof, in the cells and/or tissues by analysis of p53-specific RNA, and, assigning an observed change in the treated cells' and /or tissue's expression profile to the corresponding treatment with one or more cytostatic compounds and/or radiation, and

(e) comparing the expression profile obtained in step (b) with an expression profile of step (d) and based on the comparing, selecting one or more cytostatic compounds and/or radiation treatments for administering to the subject.

~~wherein the expression profiles of apoptosis-regulating and/or cell-growth regulating genes and/or individual differences (mutations) in the gene sequences is determined~~

~~and the changes associated with chemotherapeutic agents and/or radiation therapy are identified, represented and diagnostically evaluated.~~

2. (Currently amended) ~~Method~~ A method in accordance with claim 1, wherein the expression profiles of one or more additional genes are determined, the additional genes being selected from the group consisting of the Bcl-2 family, ~~preferably~~ Bax, ~~p53,~~ p16, caspases, Rb, cyclins, inhibitors of cyclin-dependent kinases (CDKIs), ATM and inhibitors of apoptosis proteins (IAPs), and/or ~~mutations~~ variants thereof ~~in the genes~~ are determined using protein or DNA/RNA analyses and evaluated singly or in various combinations.

3. (Currently amended) ~~Method~~ A method in accordance with claim 1, wherein ~~individual~~ differences in the sequence of apoptosis and/or cell growth-regulating genes ~~and~~ and/or ~~the~~ their expression profiles~~of their gene products, which occur in malignant diseases,~~ are ~~related~~ correlated with the apoptosis and/or cell growth-regulating genes' ~~to an individually different~~ responsiveness to ~~drugs~~ cytostatic compounds and/or radiation. ~~and are evaluated, particularly with regard to their relevance to the response to therapy.~~

4. (Currently amended) Method for selecting ~~more efficacious~~ therapeutic agents for the treatment of malignant diseases, wherein the ~~status~~ expression profiles of one or more cell cycle genes and/or of apoptosis-associated target genes or ~~of their~~ gene products thereof, in body fluids, cells or organs are determined ex vivo ~~and the more efficacious agents for this status are selected~~.

5. (Currently amended) ~~Method~~ A method in accordance with claim 4, wherein agents for the treatment of leukemic and non-leukemic malignant neoplasias ~~diseases~~ and other hematological ~~malignomas~~ malignancies and solid tumors like, for example, tumors of the gastrointestinal tract, pancreas, prostate, gynecological tumors, sarcomas, brain tumors, skin and lung tumors as well as tumors of endocrine organs are evaluated.

6. (Currently amended) ~~Method~~ A method in accordance with claim 4, wherein therapeutic agents are known cytostatic agents, preferably steroid hormones, alkylating agents, anthracyclines, anti metabolites, taxanes, topoisomerase inhibitors, Vinca alkaloids, cisplatin and other platinum analogues and many more.

7. (Canceled).

8. (Canceled).

9. (Currently amended) ~~Method~~ A method in accordance with claim 1, wherein for the treatment of leukemic ~~diseases~~and non-leukemic malignant neoplasias ~~, mainly of chronic lymphocytic leukemia,~~ the p53 expression profile or mutations are evaluated and, subjects demonstrating p53 mutations ~~with the presence of mutations within the coding sequence regions of the p53 genes, a~~ will not receive a treatment with DNA-damaging substances or other cancer therapeutics~~, particularly with alkylating agents, anthracyclines and fludarabine, is avoided and another form of therapy is selected.~~

10. (Currently amended) ~~Method~~ A method in accordance with claim 1, wherein by combination of the determination of the status of different apoptosis and/or cell growth-associated genes, ~~mainly of p53 and Bax~~ or their gene products and/or mutations and/or their homologues, individual schemes of treatment are drawn up.

11. (New) The method of claim 1, wherein the expression profiles of one or more additional genes are determined, the genes being selected from the group consisting of Bcl-2, Bax, p16 and caspase.

12. (New) The method of claim 9, wherein the leukemic disease is chronic lymphocytic leukemia.

13. (New) The method of claim 10, wherein the genes are p53 and/or Bax.